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Effect of acoustic flows on the structure of a constricted glow discharge in argon

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Abstract

© 2015, Pleiades Publishing, Inc. Numerical experiments on the effect of acoustic flows on the structure of a constricted glow discharge in argon have been performed in the hybrid approximation. The possibility of controlling the combustion regime of the glow discharge with an extended positive column at a high pressure by means of the formation of acoustic flows at the excitation of a standing acoustic wave has been demonstrated. In this case, the discharge transfers from the constricted combustion regime to the diffuse one and becomes stable.

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